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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/654,081	09/03/2003	Richard M. Dow	RMD-100US	4111
23122	7590	01/12/2009		
RATNERPRESTIA P.O. BOX 980 VALLEY FORGE, PA 19482			EXAMINER GILBERT, WILLIAM V	
			ART UNIT 3635	PAPER NUMBER
			MAIL DATE 01/12/2009	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/654,081

Applicant(s)

DOW ET AL.

Examiner

William V. Gilbert

Art Unit

3635

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 September 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-44 is/are pending in the application.
- 4a) Of the above claim(s) 13-34, 37 and 38 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12, 35, 36, 39-44 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SF/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

This is a final Office action. Claims 1-44 are pending. Claims 13-34, 37 and 38 are withdrawn from consideration. Claims 1-11, 35, 36 and 39-44 are examined below.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-5, 8, 12, 35, 36, 39-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Worrell (U.S. Patent No. 6,718,722) in view of Klein (U.S. Patent No. 5,899,134).

Claim 1: Worrell discloses a triaxial woven structure (Fig. 2: 14 is a wire mesh, Col. 4, lines 50-55) with first, second and third rigid members (Fig. 2, generally). Worrell does not disclose the pattern of the weave as claimed. Klein discloses a triaxial woven structure (Fig. 2) with a first member (14) in a serpentine shape (see Fig. 3A, generally) and a plurality of second members (16) having a serpentine shape, a first peak (see "A" from attached Fig. 2 from Worrell below) of the first member is in a trough of a second member, a second peak ("B" below) of the first member is in a trough of a second one of the second members, and a third beak ("C" below) of the first member is in a trough of a third one of the second members, and a third member (12) having a linear shape (see Fig. 3A) in a trough of the first member ("D" below) and a peak ("E" below) of a second member. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to use the weave pattern for the woven structure in Worrell as a matter of functional equivalence that would perform equally as well. Please note that it is known that the woven structure in Klein has two positions noted in Figures 3A and 3B. The examiner is

using the shape in 3A for this rejection. Regarding the limitation "preshaped", it is considered product-by-process; therefore, determination of patentability is based on the product itself. See M.P.E.P. §2133. The patentability of the product does not depend on its method of production. If the product-by-process claim is the same as or obvious from a product of the same prior art, the claim is unpatentable even though the prior product was made by a different process. *In re Thorpe*, 777 F.2d 695 (Fed. Cir. 1985). This argument is the same throughout the rejection and is, therefore only stated at the independent claims to prevent redundancy.

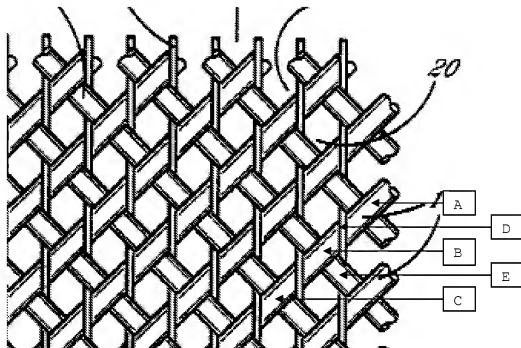


Figure 2 from Worrell

Claim 2: the third member locks the first and second members together (Klein: generally).

Claim 3: the first member, a second member and the third member form the shape of a triangle (Klein Fig. 2, generally.)

Claim 4: while Figure 2 of Klein does not particularly disclose the limitation of the angle, Figure 5 shows a triaxial woven structure that appears to meet the angle limitation as claimed. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to have the range limitation as a matter of functional equivalence that would perform equally as well as the angel range of Figure 2.

Claim 5: as shown in the drawings (Klein, Fig. 2) the angle appears to be within the limitation as claimed.

Claim 8: the material is reinforcing bar material (Worrell: Col. 4, lines 50-55).

Claim 12: Worrell in view of Klein disclose the structure is substantially planar in form.

Claim 35: Worrell discloses a triaxial woven structure (Fig. 2: 14 is a wire mesh) with first, second and third rigid members (Fig. 2, generally). Worrell does not disclose the pattern of the weave as claimed. Klein discloses a triaxial woven structure (Fig. 2) with a first member (14) in a serpentine shape (see Fig. 3A, generally) and a plurality of second members (16) having a serpentine shape, a first peak (see "A" from attached Fig. 2 from Worrell) of the first member is in a trough of a second member, a second peak ("B") of the first member is in a trough of a second one of the second members, and a third beak ("C") of the first member is in a trough of a third one of the second members, and a third member (12) having a linear shape (see Fig. 3A) in a trough of the first member ("D" below) and a peak ("E" below) of a second member. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to use the weave pattern for the woven structure in Worrell as a matter of functional

equivalence that would perform equally as well. Please note that it is known that the woven structure in Klein has two positions noted in Figures 3A and 3B. The examiner is using the shape in 3A for this rejection. Last, the prior art of record does not disclose the method of making as claimed. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to use the method, because one of ordinary skill in the art would assemble the wire mesh in such a manner deemed most convenient, and the most convenient method of assembly would be to assemble the system as in the manner claimed. See "response to argument" section below for further explanation.

Claim 36: while the prior art of record does not disclose repeating the steps as claimed, it would have been obvious at the time the invention was made to a person having ordinary skill in the art as a matter of duplication of parts to have this limitation because duplication of parts has no patentable significance unless a new and unexpected result is produced. *In re Harza*, 274 F.2d 669 (CCPA 1960). See MPEP §2144.04.

Claim 39: Worrell discloses a triaxial woven structure (Fig. 2: 14 is a wire mesh) with a plurality of first, second and third rigid members (Fig. 2, generally). Worrell does not disclose the pattern of the weave as claimed. Klein discloses a

triaxial woven structure (Fig. 2) with a plurality of first rigid members (14) in a serpentine shape (see Fig. 3A, generally) and at least one second member (16) having a serpentine shape, a first trough of the second member is in a peak of the first one of the first members, a second trough of the second member is in a peak of a second one of the first members and a third trough of the second member is in a peak of a third one of the first members, and a third member (12) of linear shape (Klein Fig. 3A) and in a trough of a first one of the first members and a peak of the second member. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to use the weave pattern for the woven structure in Worrell as a matter of functional equivalence that would perform equally as well. Please note that it is known that the woven structure in Klein has two positions noted in Figures 3A and 3B. The examiner is using the shape in 3A for this rejection. Regarding the limitation "preshaped", it is considered product-by-process; therefore, determination of patentability is based on the product itself. See M.P.E.P. §2133. The patentability of the product does not depend on its method of production. If the product-by-process claim is the same as or obvious from a product of the same prior art, the claim is unpatentable even though the prior product was

made by a different process. *In re Thorpe*, 777 F.2d 695 (Fed. Cir. 1985). This argument is the same throughout the rejection and is, therefore only stated at the independent claims to prevent redundancy.

Claims 40 and 41: the third member is a plurality of members (Klein: 12), a second one of the members is in an adjacent trough of the first member and a peak of an adjacent one of the second members.

Claims 42, 43: Worrell discloses a triaxial woven structure (Fig. 2: 14 is a wire mesh) with first, second and third rigid members (Fig. 2, generally). Worrell does not disclose the pattern of the weave as claimed. Klein discloses a triaxial woven structure (Fig. 2) with a first rigid member (14) in a serpentine shape (see Fig. 3A, generally) a second member (16) having a serpentine shape, a first peak (or vertex) of the first member is in a trough (or bottom portion) of a second member, the second axis intersects the first axis, a vertex of a second peak of a first member is in a bottom portion of a trough of a second one of the second members, and a third member (12) having a linear shape (see Fig. 3A) and a third axis in a trough of the first member and a peak of a second member, the third axis intersects both the first axis and the second axis. It would have been obvious at the time the invention was made to a person

having ordinary skill in the art to use the weave pattern for the woven structure in Worrell as a matter of functional equivalence that would perform equally as well. Please note that it is known that the woven structure in Klein has two positions noted in Figures 3A and 3B. The examiner is using the shape in 3A for this rejection. Regarding the limitation "preshaped", it is considered product-by-process; therefore, determination of patentability is based on the product itself. See M.P.E.P. §2133. The patentability of the product does not depend on its method of production. If the product-by-process claim is the same as or obvious from a product of the same prior art, the claim is unpatentable even though the prior product was made by a different process. *In re Thorpe*, 777 F.2d 695 (Fed. Cir. 1985). This argument is the same throughout the rejection and is, therefore only stated at the independent claims to prevent redundancy.

Claims 6, 7, 9-11 and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Worrell in view of Klein and Edwards (U.S. Publication 2001/0023568).

Claim 6: the prior art of record discloses the claimed invention including that the reinforcement is wire (Worrell: Col. 4, lines 50 and following) which is known to be round, but

the prior art of record does not specifically disclose it is circular in cross section. Worrell discloses reinforcement that is substantially circular (Fig. 1C) in cross section. It would have been obvious at the time the invention was made to a person having ordinary skill in the art as a matter of design choice to have this limitation because a configuration of an invention is a matter of choice that a person of ordinary skill in the art would have found obvious absent persuasive evidence that the particular configuration of the claimed subject matter was significant. *In re Dailey*, 357 F.2d 669, 149 USPQ 47 (CCPA 1966). See MPEP §2144.04.

Claim 7: the prior art of record discloses the claimed invention except that the members are rectangular in cross-section. Edwards discloses reinforcement that is rectangular in cross section (Fig. 1D). It would have been obvious at the time the invention was made to a person having ordinary skill in the art as a matter of design choice to have this limitation because a configuration of an invention is a matter of choice that a person of ordinary skill in the art would have found obvious absent persuasive evidence that the particular configuration of the claimed subject matter was significant. *In re Dailey*, 357 F.2d 669, 149 USPQ 47 (CCPA 1966). See MPEP §2144.04.

Claim 9: the prior art of record discloses the claimed invention except that the members are solid in cross section. Edwards discloses a solid reinforcement member (Fig. 1D). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to have the members as solid because solid reinforcement is well known in the art for being strong yet flexible.

Claim 10: the members are polymeric (Edwards: abstract).

Claim 11: the prior art of record discloses the claimed invention except that the members are hollow. Edwards discloses a hollow reinforcement member (1B, 1C). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to have the member as hollow because hollow members are known in the art for being lightweight yet durable.

Claim 44: Worrell discloses a triaxial structure (Fig. 2: 14) comprising first, second and third rigid members. Worrell does not disclose the weave pattern as claimed. Klein discloses a triaxial woven structure with a first member (14) having a serpentine shape with a plurality of peaks and troughs, a plurality of second members (16) having a serpentine shape with peaks and troughs, a first peak of the first member is in a trough of the first one of the second members, and a second peak

of the first member is in a trough of a second one of the second members, and a third member having a linear shape (12) and in a trough of the first member and a peak of the second member (see Fig. 2 of Klein, generally.) It would have been obvious at the time the invention was made to a person having ordinary skill in the art to use the weave pattern for the woven structure in Worrell as a matter of functional equivalence that would perform equally as well. Further, the reinforcement in Worrell and Klein is not disclosed as round with the same diameter, though the species in Figure 5 of Klein show first, second and third members having substantially the same size. Edwards discloses reinforcement that is round, which means it would have a diameter. It would have been obvious at the time the invention was made to a person having ordinary skill in the art as a matter of design choice to have this limitation because a configuration of an invention is a matter of choice that a person of ordinary skill in the art would have found obvious absent persuasive evidence that the particular configuration of the claimed subject matter was significant. *In re Dailey*, 357 F.2d 669, 149 USPQ 47 (CCPA 1966). See MPEP §2144.04. Further, having the members the same size would be well within the level of skill in the art to aid in the ease of manufacture without having to use different sized members. Regarding the limitation

"preshaped", it is considered product-by-process; therefore, determination of patentability is based on the product itself. See M.P.E.P. §2133. The patentability of the product does not depend on its method of production. If the product-by-process claim is the same as or obvious from a product of the same prior art, the claim is unpatentable even though the prior product was made by a different process. *In re Thorpe*, 777 F.2d 695 (Fed. Cir. 1985). This argument is the same throughout the rejection and is, therefore only stated at the independent claims to prevent redundancy.

Response to Arguments

2. The following addresses applicant's remarks/arguments dated 22 September 2008:

Applicant's remarks and arguments about the limitation "preshaped" are, respectfully not persuasive. The limitation "preshaped" is considered product-by-process. Determination of patentability is based on the product itself. See M.P.E.P. §2133. The patentability of the product does not depend on its method of production. If the product-by-process claim is the same as or obvious from a product of the same prior art, the claim is unpatentable even though the prior product was made by

a different process. *In re Thorpe*, 777 F.2d 695 (Fed. Cir. 1985). To have an apparatus "preshaped" claims as to how the apparatus is made. As shown, Worrell does have a mesh; it is not woven in the pattern as claimed, hence the incorporation of the Klein reference.

In addition, the examiner respectfully disagrees with applicant's assertion that the rationale for rejecting claim 35 was a conclusive statement. Applicant's method of claiming the invention is considered an *in situ* arrangement. Assembling the system of three reinforcement members (two with a serpentine shape and one linear) almost has to occur in the method claimed, otherwise the system could not be assembled. Applicant should also respectfully note that applicant has not claimed a particular order to the method steps as claimed.

Conclusion

3. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this

action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William V. Gilbert whose telephone number is 571.272.9055. The examiner can normally be reached on Monday - Friday, 08:00 to 17:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Chilcot can be reached on 571.272.6777. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/W. V. G./
Examiner, Art Unit 3635
/Basil Katcheves/
Primary Examiner, Art Unit 3635